

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Bruce P. Konen

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Confirmation No.: 7873

Examiner: Omar Flores Sanchez

For: DRILL POWERED CABLE CUTTER

CERTIFICATE OF MAILING

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NAME: Joel H. Bock

SIGNATURE: _____

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

Sir:

In reply to the Office Action of May 2, 2006, please amend the above-identified application as follows: Amendments to the claims appear on page 2. Remarks begin on page 7.

LISTING OF CLAIMS:

Claim 1 (currently amended). A cable cutter adapted for attachment to a power drill of the type having a chuck extending from a drill housing, and a handle having a grip portion extending below the drill housing, the cable cutter comprising:

a housing;

first and second cutting blades, at least one of which is connected to the housing, the blades being mounted for movement relative to one another;

a drive assembly including a drive shaft mounted for rotation in the housing and extending therefrom so as to be releasably engageable with the chuck of the power drill, a ~~worm~~ first gear mounted on the drive shaft for rotation therewith, a main shaft mounted for rotation in the housing, a ~~worm~~ second gear being in engagement with the ~~worm~~ first gear and mounted on the main shaft for rotation therewith, and a drive gear mounted on the main shaft for rotation therewith and engageable with one of the cutting blades for moving the blades relative to one another; and

a torque arm attached at one end to the housing and having an attachment element at the other end which is adapted for engagement with the grip portion of the handle of the drill, the attachment element including a first portion which, when the torque arm is installed, is adjacent one side of the grip portion, a second portion which is adjacent the other side of the grip portion, and a third portion connecting the first and second portions.

Claim 2 (canceled).

Claim 3 (currently amended). The cable cutter of claim 1 wherein the attachment element comprises a hook that is engageable with the grip portion of the handle of the drill.

Claim 4 (previously presented). The cable cutter of claim 1 wherein the torque arm is adjustably fixed to the housing.

Claim 5 (original). The cable cutter of claim 4 further comprising a torque arm clamp connectable to the housing and to which the torque arm is slidably connected.

Claim 6 (original). The cable cutter of claim 1 further comprising a stabilizing handle removably attachable to the housing.

Claim 7 (original). The cable cutter of claim 6 wherein the cable cutter housing defines left and right lateral sides, and the stabilizing handle being removably attached such that it can extend either beyond the left lateral side or beyond the right lateral side.

Claim 8 (original). The cable cutter of claim 7 further comprising a sleeve attached to the housing and having a hollow bore extending laterally of the housing and fully through the sleeve, a torque arm clamp sized to fit into the hollow bore and having a fastening element which is releasably engageable with the torque arm, one end of the stabilizing handle being sized to fit into the hollow bore and releasably engage the torque arm clamp.

Claim 9 (currently amended). A cable cutter adapted for attachment to a power drill of the type having a chuck and a handle, comprising:

a housing having first and second cutting blades connected thereto, the cutting blades being mounted for movement relative to one another; and

a drive assembly ~~comprising~~ consisting essentially of a drive shaft mounted for rotation in the housing and extending therefrom for releasable connection to the drill chuck, a ~~worm~~ first gear mounted for rotation with the drive shaft, a main shaft mounted for rotation in the housing, a ~~worm~~ second gear mounted for rotation with the main shaft and in engagement with the ~~worm first gear~~, ~~the worm gear operatively engaging at least one of the cutting blades for moving the blades relative to one another~~, and a drive gear mounted for rotation with the main shaft and engageable with one of the cutting blades.

Claim 10 (original). The cable cutter of claim 9 further comprising a torque arm extending from the housing.

Claim 11 (original). The cable cutter of claim 9 further comprising a removable, laterally extending stabilizing handle releasably connected to the housing.

Claim 12 (original). The cable cutter of claim 9 further comprising a stabilizing handle and torque arm which are removably attached to opposite sides of the housing, each of the handle and torque arm being capable of being removed and reattached so that the relative positions of the handle and torque arm on the opposite side of the housing are reversible.

Claim 13 (original). The cable cutter of claim 9 further comprising a stabilizing handle, a torque arm, a sleeve attached to the housing and having a hollow bore extending laterally of the housing and fully through the sleeve, a torque arm clamp sized to fit into the hollow bore and having a fastening element which is releasably engageable with the torque arm, one end of the stabilizing handle being sized to fit into the hollow bore and releasably engage the torque arm clamp.

Claim 14 (original). The cable cutter of claim 9 wherein the housing has a cut away portion defining an entrance to the housing through which at least one of the blades is movable, and the housing further comprises a brush adjacent an edge of the housing at the entrance to the housing.

Claim 15 (original). The cable cutter of claim 9 wherein the drive shaft is transverse to the main shaft.

Claim 16 (previously presented). The cable cutter of claim 9 further comprising a segment gear formed on one of the cutting blades, the segment gear being engageable with the drive gear.

Claim 17 (currently amended). The cable cutter of claim 9 wherein at least three bearings support the main shaft, each bearing supporting the main shaft at a separate longitudinal location for allowing rotational movement of the ~~journal~~ main shaft.

Claim 18 (currently amended). A cable cutter comprising:
a housing;

first and second cutting blades connected to the housing, at least one of the cutting blades being movable relatively to the other;

a drive assembly including ~~a main shaft mounted for rotation in the housing, the drive assembly being in operative engagement with at least one of the cutting blades~~ a drive shaft mounted for rotation in the housing and extending therefrom for releasable connection to a chuck of a power drill, a first gear mounted for rotation with the drive shaft, a main shaft mounted for rotation in the housing, a second gear mounted for rotation with the main shaft and in engagement with the first gear, and a drive gear mounted for rotation with the main shaft and engageable with one of the cutting blades for moving the blades relative to each other; and

at least three bearings mounted in the housing, each bearing supporting the main shaft at a separate location along its length, one of said bearing being disposed between the second gear and the drive gear ~~for providing increased support over a shaft supported by fewer than three bearings along its length.~~

Claim 19 (currently amended). The cable cutter of claim 18 wherein each end of the main shaft is supported by first and second bearings and ~~a third~~ said one bearing intermediate the first and second bearings further supports the main shaft.

Claim 20 (currently amended). A cable cutter adapted for attachment to a power drill of the type having a drill housing, a handle extending from the drill housing and a chuck, the cable cutter comprising:

a housing having first and second cutting blades connected thereto, the cutting blades being mounted for movement relative to one another; and

a drive assembly including a drive shaft mounted for rotation in the housing and extending therefrom so as to be releasably engageable with the chuck of the power drill, ~~a worm~~ first gear mounted on the drive shaft for rotation therewith, ~~a worm~~ second gear being in engagement with the ~~worm~~ first gear and mounted for rotation in the housing, and a drive gear movable with the ~~worm~~ second gear and engageable with one of the cutting blades, wherein the cutting blades are connected to the housing at a location which is laterally spaced from the drive shaft.

Claim 21 (canceled).

Claim 22 (currently amended). The cable cutter of claim 20, further comprising a main shaft mounted for rotation in the housing, wherein the ~~worm~~ second gear and the drive gear are mounted on the main shaft.

REMARKS

This amendment accompanies the filing of a Request for Continued Examination, and a request for a one-month extension of time and the applicable fees therefor.

Responding to the Office Action of May 2, 2006, the indication of allowable subject matter in claims 8 and 13 is noted and appreciated.

Claim 1 has been amended to more clearly distinguish it over the cited references. Claim 1 now specifies that when the attachment element of the torque arm is in its installed position it has a first portion which is adjacent one side of the drill handle, a second portion which is adjacent the other side of the drill handle, and a third portion connecting the first and second portions. Nothing of the sort is found in the cited references. As the Examiner stated, Saltus-Werk (DE 3,939,016) does not show a torque arm. Pace 4,317,282 is cited for a torque arm 10. Applicant presumes the Examiner is referring to the pair of L-shaped side panels 12 in Pace as constituting a torque arm. It is believed there are two such side panels (note Col. 1, line 62 which refers to a pair of side panels, and the reference to plural side panels in lines 64 and 67). Since the side panels are two separate elements, there is no third portion which connects first and second portions on either side of the handle, as called for in the amended claim 1.

With regard to claim 3, the Examiner cites Figs. 1 and 2 of Pace '282, "the part that connects with the handle", as showing a hook. Applicant presumes the Examiner refers to the downwardly extending (as seen in Fig. 1 of Pace '282) portion of the side panel as the part that connects with the handle. In other words, we take it the Examiner refers to the part of the side panel 12 at or below the notch 14 as a hook. But there is no showing or teaching in Pace that this piece is anything other than a flat plate. Thus, it cannot have the hook construction called for in claim 3. Even if the entirety of the side panel is considered to be a hook, due to its L-shape, that

hook does engage the handle of the drill, as called for in claim 1. Clearly, Pace '282 does not have a hook, as that term is used in the present application. Reconsideration of the rejection of claim 3 is requested.

With regard to claim 4, Pace '282 gives no indication at all that the side panels 12 are adjustably fixed to his housing 16. Pace's disclosure is admittedly vague on this point but we submit the better conclusion is that the side panels 12 are screwed to the housing 16. Note Col. 1, line 66 states the housing 16 is secured by screws 17 between the side panels. Thus, there is no adjustability of the "torque arm" 12 to the housing as required by claim 4. We believe claim 4 distinguishes over the cited references for this reason, in addition to those mentioned above with regard to claim 1.

The situation with regard to claim 5 is similar to that of claim 4. Pace '282 contains no teaching that his "torque arms" 12 are slidably connected to a torque arm clamp which is connected to the housing 16. Screws 17 in Pace provide no adjustment at all, other than to attach or allow detachment of the side panels to the housing. It is believed claim 5 is allowable for this reason.

Claim 9 has been amended to further distinguish over Saltus-Werk (DE 3,939,016). The drive assembly of claim 9 is now recited in closed-ended form. Thus, the drive assembly has only a drive shaft, a first gear on the drive shaft, a main shaft, a second gear on the main shaft and in engagement with the first gear, and a drive gear on the main shaft and engageable with one of the cutting blades. Saltus-Werk (DE 3,939,016) has additional elements in its drive assembly that result in a more complex, costly construction than that of the amended claim 9. It has an extra set of reduction gears and at least one extra shaft, compared to the construction set forth in amended claim 9. It is believed claim 9 is now in allowable condition.

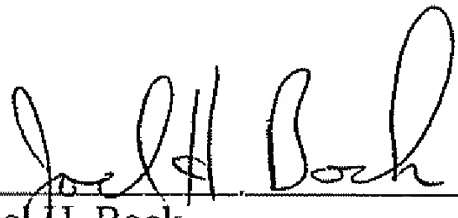
Claim 18 has been amended to remove the phrase objected to under §112. Also, claim 18 has been amended to distinguish it over the combination of Saltus-Werk (DE 3,939,016) and Berlinger 3,973,449. Berlinger '449 was cited for the use of three bearings on a shaft. Claim 18 has now been amended to call for the drive assembly to include a first gear on a drive shaft and engaging a second gear on a main shaft. A drive gear is also mounted on the main shaft. The bearings are located such that one of the bearings is between the second gear and the drive gear. This is not the case in Berlinger '449 which has only a single gear 50 on the shaft 28. It is also pointed out that there is no indication in the references that one skilled in the art would think to combine these two references. It is submitted that the loads involved in cutting heavy cables are considerably greater than those of the wiper motor of Berlinger. Indeed, Berlinger's preferred construction is his Figs. 1 and 2 that use a cantilevered pinion 50 because ordinarily that should be adequate in the environment of that device. We think the references are not properly combinable. But even if they are combined, the combination does not teach or suggest the construction now recited in amended claim 18.

Claim 20 is resubmitted unchanged from the previous version. Reconsideration of the rejection based on anticipation by Saltus-Werk (DE 3,939,016) is respectfully requested. Claim 20 calls for the cutting blades to be connected to the housing at a location which is laterally spaced from the drive shaft. Since Saltus-Werk (DE 3,939,016) does not include an end elevation view or a plan view, it is difficult to ascertain the lateral relationship between the cutting blades and the drive shaft. For this reason alone, Saltus-Werk (DE 3,939,016) cannot teach the claimed invention. However, the few hints Saltus-Werk (DE 3,939,016) does provide as to the lateral placement of the blades and drive shaft strongly suggest they are aligned with one another, not laterally spaced as called for in claim 20. First, note in the Figure that toothed

wheel 20 is broken away to reveal toothed wheel 22, which engages the cutting jaw 24. Thus, the cutting jaw is behind the gear 20, more than likely placing the cutting blades in line with the drive shaft 11, not laterally spaced from it as called for in claim 20. Similarly and even more tellingly, note that jaw 24 is behind a guide 27 and the guide itself is attached to the mounting plate 4. This almost certainly places the cutting blades in or near alignment with the drive shaft 11. The arrangement of the cutting blades and drive shaft in the Saltus-Werk does not show that of the present invention. Reconsideration is requested.

In view of all the foregoing, reconsideration and allowance of all pending claims are respectfully requested. If any additional fees are required, the Commissioner is hereby authorized to charge Deposit Account No. 50-1039.

Respectfully submitted,

By: 
Joel H. Bock
Registration No. 29,045

COOK, ALEX, McFARRON, MANZO,
CUMMINGS & MEHLER, LTD.
200 West Adams Street, Suite 2850
Chicago, Illinois 60606
(312) 236-8500
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